

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A compact smoke alarm assembly, comprising:

a smoke detection chamber defined by a body having a plurality of openings ~~for allowing that allows~~ airflow therethrough, the body ~~having~~ comprising a sound inlet aperture configured to admit sound into the chamber;

a smoke detector mounted to the body for communication within the chamber;  
an electrical circuit operatively connected to the smoke detector, the circuit providing an electrical signal when the smoke detector detects smoke in the chamber; and

a sound generating device mounted external to the chamber and adjacent to the sound inlet aperture, the sound generating device operable in response to the electrical signal, and the sound generating device configured to transmit sound through the sound inlet aperture and into the chamber, [[:]]

wherein the ~~smoke-detection~~ chamber is sized and shaped to cause resonance at the operating frequency of the sound generating device.

2. (Currently Amended) ~~[[An]] The assembly as claimed in~~ according to claim 1, wherein the sound generating device is a piezoelectric disc.

3. (Currently Amended) [[An]] The assembly ~~as claimed in~~ according to claim 2, further comprising an annulus surrounding the sound inlet aperture, the annulus supporting the piezoelectric disc.

4. (Currently Amended) [[An]] The assembly ~~as claimed in~~ according to claim 1, wherein the body is dimensioned such that the volume of the chamber is substantially in accordance to the Helmholtz formula at the operating frequency of the sound generating device, thereby providing an efficient acoustic coupling.

5. (Currently Amended) A compact smoke alarm assembly, comprising:

a smoke detection chamber defined by a body having a plurality of openings ~~for allowing that allows~~ airflow therethrough, the body ~~having comprising~~ a sound inlet aperture configured to admit sound into the chamber;

a photoelectric sensor mounted to the body for communication within the chamber;

a light source mounted to the body for communication with the chamber;

an electrical circuit operatively connected to a sensor ~~the smoke detector~~, the circuit providing an electrical signal when the sensor ~~smoke detector~~ detects smoke in the chamber; and

a sound generating device mounted external to the chamber and adjacent to the sound inlet aperture, the sound generating device operable in response to the electrical signal, and the sound generating device configured to transmit sound through the sound inlet aperture and into the chamber, [[:]]

wherein the ~~smoke detection~~ chamber is sized and shaped to cause resonance at the operating frequency of the sound generating device.

6. (Currently Amended) ~~[[An]] The assembly as claimed in~~ according to claim 5, wherein the body comprises:

an upper wall;

a lower wall; and

a peripheral wall, the peripheral wall comprising a plurality of labyrinth members arranged in a partly overlapping circular ~~patent~~ pattern so as to substantially prevent the entry of light into the chamber while allowing sound to exit at high sound pressure levels.

7. (Currently Amended) ~~[[An]] The assembly as claimed in~~ according to claim 6, wherein the sound generating device is a piezoelectric disc.

8. (Currently Amended) ~~[[An]] The assembly as claimed in~~ according to claim 7, further comprising an annulus surrounding the sound inlet aperture, the annulus supporting the piezoelectric disc.

9. (Currently Amended) ~~[[An]] The assembly as claimed in~~ according to claim 6, wherein the body is dimensioned such that the volume of the chamber is substantially in accordance to the Helmholtz formula at the operating frequency of the sound generating device, thereby providing an efficient acoustic coupling.

10. (Canceled)

11. (Currently Amended) A compact smoke alarm assembly comprising:

a smoke detection chamber defined by a body having a plurality of openings ~~for allowing~~ that allows airflow therethrough, the body ~~having~~ comprising a sound inlet aperture configured to admit sound into the chamber;

a sensor ~~smoke-detector~~ mounted to the body for communication within the chamber;

an electrical circuit operatively connected to the sensor ~~smoke-detector~~, the circuit providing an electrical signal when the sensor ~~smoke-detector~~ detects smoke in the chamber; and

a sound generating device mounted external to the chamber and adjacent to the sound inlet aperture, the sound generating device operable in response to the electrical signal, and the sound generating device configured to transmit sound through the sound inlet aperture and into the chamber, [[:]]

wherein:

the ~~smoke-detection~~ chamber is configured to cause resonance at an operating frequency of the sound generating device; and

the body is configured such that the volume of the chamber is generally in accordance to the Helmholtz formula at the operating frequency of the sound generating device.

12. (Currently Amended) [[An]] The assembly ~~as claimed in~~ according to claim 11, wherein the sound generating device is a piezoelectric disc.

13. (New) The assembly according to claim 1, wherein the body and the sound inlet aperture are formed integrally.

14. (New) The assembly according to claim 5, wherein the body and the sound inlet aperture are formed integrally.

15. (New) The assembly according to claim 11, wherein the body and the sound inlet aperture are formed integrally.